

### **REMARKS**

Reconsideration and allowance are requested. Claims 32-48 and 53-56 are pending and claims 32, 38 and 53 are amended. Claims 49 – 52 are cancelled.

#### **Abstract**

On page of the final Office Action dated February 22, 2006, the Examiner reminds the Applicant of formatting for the Abstract. A new abstract is presented above according to the Examiner's suggestion.

#### **Claims 49-52 Election/Restriction**

Claims 49-52 are cancelled as required.

#### **Rejection of Claims 32-35 and 38-42 Under Section 102(b)**

The Examiner rejects claims 32-35 and 38-42 under section 102(b) as being anticipated by U.S. Pat. No. 5,309,474 to Gilhousen et al. ("Gilhousen et al."). Applicant traverses this rejection and submits that Gilhousen et al. fail to teach each claim limitation.

We first turn to claim 32. This claim was amended but not to overcome the prior art but to clarify the claim language and to broaden the claim. Claim 32 recites a method for code division switching at an originating terminal. The method comprises spreading a transmission signal by a PN-code assigned to an intended receiving port, inserting an identifier of a few bits for identifying a user, spreading payload data by an orthogonal code, spreading the orthogonal spread payload data signal by the PN-code and forwarding the PN-code spread transmission signal and said twice spread payload data signal to an access radio port. Applicant submits that Gilhousen et al. fail to teach at least the limitations of spreading a transmission signal by a PN-code assigned to an intended receiving port and inserting an identifier of a few bits for identifying a user.

The Examiner asserts that the step of spreading a transmission signal by a PN-code assigned to an intended receiving port is taught by Gilhousen et al.'s FIG. 11 features 614 and 616 "for transmitting spreading signal to base station." However, the claim language and Gilhousen et al. do not teach the same thing. The claim requires that the PN-code be assigned to an intended receiving port. In contrast, Gilhousen et al. teach away from this feature as shall be seen. Gilhousen et al.'s FIG. 11 shows a modulation scheme 452 in which user digital signals are encoded, interleaved and then encoded with a Walsh Encoder 604. The output is exclusively OR'd with a PN generator 608 that generates a PN code according to the received mobile unit address as is shown. The output of 606 is input to exclusive OR's 610 and 612 with PN generators 614 and 616 that generate codes  $PN_I$  and  $PN_Q$ . Contrary to the Examiner's assertion, the  $PN_I$  and  $PN_Q$  codes are not "assigned to an intended receiving port." In fact, at column 35, lines 20 – 30, Gilhousen et al. teach that "Unlike the cell-to-mobile link, where each sector or cell was identified by unique sequences of length 215, here all mobile units use the same I and Q PN sequences." Accordingly, there is no teaching that the PN codes generated by 614 and 616 are assigned to an intended receiving port and express teachings away from such an assignment.

Furthermore, claim 32 recites spreading a transmission signal by a PN-code assigned to an intended receiving port. The signal that is processed by the Walsh Encoder and spread by the PN generator 608 in Gilhousen et al. is not a transmission signal (in contrast to the later recited payload signal in claim 32). Gilhousen et al. in any event only show a single signal submitted to modulator 452 whereas the claim recites two separate signals.

Accordingly, Applicant submits that claim 32 is patentable.

Additional reasons exist to support Applicant's position. For example, claim 32 also recites inserting an identifier of a few bits for identifying a user. The Examiner asserts that FIG. 11 ref. 608 teaches this feature. However, the PN generator 608 "generates the user specific 42-bit sequence as was discussed with reference to FIGS. 3 and 4." Col. 34, lines

17-19. Applicant respectfully submits that Gilhousen et al.'s 42-bit PN sequence is not the same as the insertion of an identifier of a "few bits" as is recited in the claim. Accordingly, this provides another reason why claim 32 is patentable.

Yet another reason relates to the step of spreading the payload data by the PN-code. The Examiner equates the PN code that is used to spread the orthogonal spread payload as feature 606 of FIG. 11. That PN code is generated from PN generator 608. However, earlier in the claim, the PN code assigned to the intended receiving port is the PN codes generated from generators 614 and 616. In claim 32, the PN-code is the same PN-code assigned to the intended receiving port. In FIG. 11 of Gilhousen et al. there are three difference PN code generators and the Examiner mixes and matches them in the analysis. This is inappropriate and underscores Applicant's argument that this claim is patentable. In sum, the claim requires spreading a transmission signal by a PN-code and spreading the orthogonal spread payload data by the same PN-code – which feature is clearly not taught by Gilhousen et al.

Accordingly, for the foregoing reasons, Applicant submits that claim 32 is patentable over Gilhousen et al. and in condition for allowance.

Claims 33 – 35 each depend from claim 32 and recite further limitations therefrom. Accordingly, Applicant submits that these claims are patentable as well.

Claim 38 is patentable for the same reasons set forth above, as well as dependent claims 39 – 42.

#### **Rejection of Claim 36 Under Section 102(b)**

The Examiner rejects claim 36 under Section 102(b) as being anticipated by U.S. Patent No. 5,805,579 ("Erving"). Applicant respectfully traverses this rejection and submits that Erving fails to teach each claim limitation.

This rejection is easily overcome by noting that claim 36 recites a method for code division switching at one originating access radio port of a terrestrial wireless network. There is at least one feature of claim 36 not taught by Erving. As can be easily seen in FIG.

1, Erving teaches a satellite system. See col. 1, line 61 – col. 2, line 9. Because claim 1 recites a terrestrial wireless network, Applicant respectfully submits that the satellite-based disclosure of Erving cannot anticipate claim 36.

Therefore, Applicant submits that claim 36 is patentable over the cited art.

**Rejection of Claims 37 and 43-47 Under Section 103(a)**

The Examiner rejects claims 37 and 43-47 under Section 103(a) as being unpatentable over U.S. Patent No. 5,434,854 to Focarile et al. (“Focarile et al.”) in view of U.S. Patent No. 5,406,550 (“McTiffin”) and U.S. Patent No. 5,910,777 to Natali et al. (“Natali et al.”).

Applicant respectfully traverses this rejection and submits that one of skill in the art would not have sufficient motivation to combine these references.

The Examiner carried the burden of establishing a prima facie case of obviousness. There must be sufficient motivation or suggestion to combine these references. Furthermore, the standard of prove to apply is a preponderance of the evidence. Applicant respectfully submits that by a preponderance of the evidence, we will show below that one of skill in the art would not be motivated to combine Natali et al. with McTiffin and Focarile et al. The Examiner provided some of the basis for the analysis by noting on page 2 of the Office Action that the Abstract of a patent should “assist readers in deciding whether there is a need for consulting the full patent text for details.” The Examiner asserts that one of skill in the art would have motivation to combine Natali et al. with Focarile et al. and McTiffin. Natali et al. teach a method of paging that assigns a unique digital address to mobile stations with each one having a unique digital address. The title of Natali et al. states that their invention relates to “power efficient paging for mobile users”. Each unique digital address is mapped into an orthogonal signal set which is transmitted to all mobile stations. Each mobile station then correlates a received orthogonal signal function against an orthogonal function corresponding to its address to identify its address from the overall orthogonal signal. See Abstract. One of

skill in the art would clearly understand that the communication here, as is shown on the first cover of the patent, is between a cell site and a group of mobile stations.

In contrast, it is clear that Focarile et al. teach communication between a cell site and a public telephone system (which will have no need for details regarding a cell site and a mobile phone) or between a cell site and another cell site (again, which does not involve communication with any mobile phone). Focarile et al., as can be seen from the picture on its cover and its Abstract is limited to communications that does not involve the mobile phone directly. Such communication involves the signal once it has reached the cell site (such as cell sites 12, 16, 18 or 20 in FIG. 1) from the mobile phone, which communication is assumed to have occurred in Focarile et al. Given the Abstract of Focarile et al. focusing the reader on cell site to cell site or public telephone communication, one of skill in the art be motivated to look further into Natali et al., which teaches in its Abstract that its disclosure focuses on paging to mobile device.

Furthermore, the Examiner asserts that the motivation to combine these references would be to “improve the throughput of the wireless system.” This goal is not accomplished or suggested in the Abstract of Natali et al., which as discussed above only teaches a method of paging where there are multiple mobile devices. There is no apparent benefit related to improved throughput.

Another reason that there is insufficient motivation to combine these references is that the “address” that the Examiner discusses in the various references is a different technical feature where the Examiner makes it appear that they are the same. The McTiffin “packet address” that was translated from the CDMA code comprises the Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) which are signals used to transmit the signal through a ATM network. As shown in FIG. 3, these signals are used to communicate the data to and from the ATM network. The “address” in Natalie et al. is a unique digital address that is assigned from a cell site for an individual mobile station. These are clearly different

“addresses”. One is only used between cell sites and the other is only used between a cell site and a group mobile stations. Therefore, Applicant submits that the generic blending of these different addresses as though they are the same is incorrect. One of skill in the art would recognize the different between the usage and technical details of each type of address and would not be motivated to consider them the same as the Examiner has done.

Therefore, Applicant submits that on the whole, there is more evidence against the combination of these references than there is supporting their combination. Therefore, claims 37 and 43 – 47 are patentable and in condition for allowance.

**Rejection of Claim 48 Under Section 103(a)**

The Examiner rejects claim 48 under Section 103(a) as being unpatentable over McTiffin in view of Natali et al. Applicant respectfully submits that that given the analysis above regarding McTiffin and Natali et al. that one of skill in the art would not have sufficient motivation to combine these references. Accordingly, claim 48 is patentable.

**Rejection of Claims 53 and 55 Under Section 103(a)**

The Examiner rejects claims 53 and 55 under Section 103(a) as being unpatentable over Focarile et al. in view of Gilhousen et al., McTiffin and Natali et al. Applicant submits that given the analysis above, that there is more evidence on the record against motivation to combine than support the motivation to combine. As discussed above, Natali et al. should not be combined with Focarile et al. and McTiffin. Furthermore, following on the above analysis, Gilhousen et al. also teach a system that communicates signals from a cell site to a mobile device. Therefore, there is insufficient motivation or reason to combine Gilhousen et al. with Focarile et al.

Therefore, Applicant submits that claims 53 and 55 are patentable.

**Rejection of Claims 54 and 56 Under Section 103(a)**

The Examiner rejects claims 54 and 56 under Section 103(a) as being unpatentable over Focarile et al. in view of Gilhousen et al., McTiffin, Natali et al. and U.S. Pat. No. 5,805,579 to Erving et al. ("Erving et al."). Applicant submits that the analysis above also provides the support and analysis that prevents Gilhousen et al. and Natali et al. from being combined with Focarile et al. Another reason that one of skill in the art would not combine these references is because Erving et al. teaches a digital switch within a satellite for processing uplink beams. One of skill in the art would not be motivated to combine these references because, as discussed above, Gilhousen et al. and Natali et al. focus on the transmission of signals from cell sites to mobile devices. Where Erving et al. focuses on a satellite switch, there is no motivation or suggestion that it be combined with these other references. Therefore, claims 54 and 56 are patentable.

**CONCLUSION**

Having addressed the rejection of claims 32-48 and 53-56, Applicant respectfully submits that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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